

Farm Equipment Mechanics

This occupation is a member of the Installation, Maintenance, and Repair cluster

Job Description

Diagnose, adjust, repair, or overhaul farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.

Job Zone

Job Zone Three: Medium Preparation Needed

Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.

Education Requirements

Postsecondary vocational award - Training is gained through a vocational training program lasting anywhere from a few weeks up to 2 years.

Interests

Realistic -Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.

Knowledge

Mechanical .Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

Skills

Science .Using scientific rules and methods to solve problems.

Critical Thinking .Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Operations Analysis .Analyzing needs and product requirements to create a design.

Writing .Communicating effectively in writing as appropriate for the needs of the audience.

Active Learning .Understanding the implications of new information for both current and future problem-solving and decision-making.

Complex Problem Solving .Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Monitoring .Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Reading Comprehension .Understanding written sentences and paragraphs in work related documents.

Technology Design .Generating or adapting equipment and technology to serve user needs.

Equipment Selection .Determining the kind of tools and equipment needed to do a job.

Tasks

- 1 .Repair or replace defective parts, using hand tools, milling and woodworking machines, lathes, welding equipment, grinders, or saws.
- 2 .Test and replace electrical components and wiring, using test meters, soldering equipment, and hand tools.
- 3 .Drive trucks to haul tools and equipment for on-site repair of large machinery.
- 4 .Fabricate new metal parts, using drill presses, engine lathes, and other machine tools.
- 5 .Record details of repairs made and parts used.
- 6 .Calculate bills according to record of repairs made, labor time, and parts used.
- 7 .Repair bent or torn sheet metal.
- 8 .Clean and lubricate parts.
- 9 .Tune or overhaul engines.
- 10 .Dismantle defective machines for repair, using hand tools.
- 11 .Examine and listen to equipment, read inspection reports, and confer with customers to locate and diagnose malfunctions.
- 12 .Install and repair agricultural irrigation, plumbing, and sprinkler systems.
- 13 .Maintain, repair, and overhaul farm machinery and vehicles, such as tractors, harvesters, and irrigation systems.
- 14 .Reassemble machines and equipment following repair; test operation; and make adjustments as necessary.

Wages

In 2006, the Pennsylvania average annual wage was \$30,770.00. The entry-level wage was \$19,410.00 while an experienced worker made \$36,450.00.

Job Outlook

During 2004, there were approximately 1,130 people employed in this field in Pennsylvania. It is projected that there will be 1,230 employed in 2014. This occupation will have about 10 openings due to growth and about 25 replacement openings for approximately 35 total annual openings. This occupation experienced moderate growth.

Colleges and Training

Agricultural Mechanics and Equipment/Machine Technology - A program that prepares individuals to maintain and repair specialized farm, ranch, and agribusiness power equipment and vehicles. Includes instruction in the principles of diesel, combustion, electrical, steam, hydraulic, and mechanical systems and their application to the maintenance of terrestrial and airborne crop spraying equipment; tractors and hauling equipment; planting and harvesting equipment; cutting equipment; power sources and systems for silos; irrigation and pumping equipment; dairy, feeding and, shearing operations; and processing systems.

Related Occupations

Electric Motor, Power Tool, and Related Repairers - Repair, maintain, or install electric motors, wiring, or switches.

Automotive Body and Related Repairers - Repair and refinish automotive vehicle bodies and straighten vehicle frames.

Mobile Heavy Equipment Mechanics, Except Engines - Diagnose, adjust, repair, or overhaul mobile mechanical, hydraulic, and pneumatic equipment, such as cranes, bulldozers, graders, and conveyors, used in construction, logging, and surface mining.

Motorboat Mechanics - Repairs and adjusts electrical and mechanical equipment of gasoline or diesel powered inboard or inboard-outboard boat engines.

Industrial Machinery Mechanics - Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems.

Maintenance Workers, Machinery - Lubricate machinery, change parts, or perform other routine machinery maintenance.

Engine and Other Machine Assemblers - Construct, assemble, or rebuild machines, such as engines, turbines, and similar equipment used in such industries as construction, extraction, textiles, and paper manufacturing.